

Claims 1-14 are cancelled.

15. (currently amended) An apparatus for high energetic ultrasonic tissue treatment in a target area inside a living body from an outside surface or a body cavity of the living body comprising:

an ultrasound generator;

~~a device~~ an exchangeable member to be applied against the skin or mucous membrane at the site of treatment;

a transducer connected with the ultrasound generator to emit generated therapeutic ultrasound energy through said ~~device~~ exchangeable member;

cooling means for cooling a contact surface of said ~~device~~ exchangeable member to be engaged with the skin or mucous membrane, wherein said ~~device is made as an exchangeable product forming~~ exchangeable member forms a heating exchange element between the ~~device~~ apparatus and the tissue.

16. (currently amended) The apparatus according to claim 15, wherein said ~~device~~ exchangeable member allows adjustment of the relative position of the transducer and said ~~device~~ exchangeable member to define the location of the target area to be treated, and to concentrate the therapeutic ultrasound energy emitted through said ~~device~~ exchangeable member on tissue to be treated medically in the target area.

17. (currently amended) The apparatus according to claim 2 16, wherein said ~~means~~ exchangeable member for cooling the contact surface comprises means for circulating a fluid.

18. (previously presented) The apparatus according to claim 17, further comprising:

means for controlling temperature of the circulating fluid

19. (previously presented) The apparatus according to claim 17, further comprising:

means for measuring a temperature of said contact surface.

20. (previously presented) The apparatus according to claim 15, wherein the ultrasound generator is also generates diagnostic ultrasound energy to be emitted by the transducer, and further comprises a comparator for comparing echoes of diagnostic ultrasound energy from treated tissue in the target area with backscattered signal of either diagnostic or therapeutic ultrasound energy from untreated tissue.

21. (previously presented) The apparatus according to claim 20, wherein the comparator is operatively connected with the transmitter to interrupt the transmission of therapeutic ultrasound energy when the echoes of backscattered signals equal a reference signal from untreated tissue.

22. (previously presented) The apparatus according to claim 20, further comprising:

a calculator for calculating the thickness of the tissue between two surfaces by means of echoes of diagnostic ultrasound energy received at said surfaces.

23. (previously presented) A method for non-invasive ultrasound wave medical treatment of tissue in a target area inside a living body from an outside surface or a body cavity of the living body, comprising the steps of:

emitting diagnostic and therapeutic ultrasound energy;

defining the location of the target area by diagnostic ultrasound energy;

concentrating therapeutic ultrasound energy on tissue to be treated medically in the target area;

controlling the condition of the tissue in the target area by backscattered ultrasound between therapeutic ultrasound pulses.

24. (previously presented) The method according to claim 23, wherein the location of the target area is defined by registering echo pulses of diagnostic ultrasound energy emitted against the tissue.

25. (previously presented) The method according to claim 23, wherein the therapeutic ultrasound energy is focused on the target area.

26. (previously presented) The method according to claim 23, wherein the therapeutic ultrasound energy is pulsed.

27. (previously presented) The method according to claim 23, wherein the therapeutic ultrasound energy is emitted in periods spaced by pauses.

28. (previously presented) The energy according to claim 27, wherein the condition of the tissue in the target area is checked by the emission of diagnostic ultrasound energy in said pauses.

29. (new) An exchangeable device to be applied against the skin or mucous membrane at a contact site of an ultrasound treatment, through which exchangeable device a therapeutic ultrasound energy, during use, is led, comprising:

cooling means for cooling a contact surface of said exchangeable device to be engaged with the skin or mucous membrane, wherein said exchangeable device forms a heating exchange element between the device and the tissue.

30. (new) A kit comprising an exchangeable device according to claim 29 and an ultrasonic source, wherein said exchangeable device is adapted to the ultrasonic source.